Naval-Industry R&D Partnership Conference 14 August 2001

RDML J.B. Godwin III
Program Executive Officer for Tactical Aircraft Programs

E-2C Radar Modernization Program (RMP)

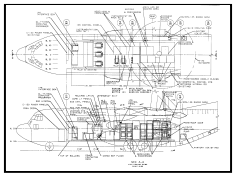
NAVAL AVIATION SYSTEMS

Antenna Roadmap

FY 97 Non-Real-Time RMP Ground Demo

FY 99 Real-Time RMP Ground Demo

FY 02 Non-RealTime Test Bed Demo



RMP with ADS-18S Rotating ESA (RESA)

FY 02 Antenna Down Select

FY 05 Real Time Test Bed Demo

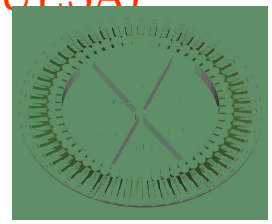
RMP SD&D FY 03-FY 10

RMP IOC FY 09

Parallel Effort to Mature Full UHF ESA (UESA)

Courtesy of Raytheon

FY 98 Receive-Only Demo

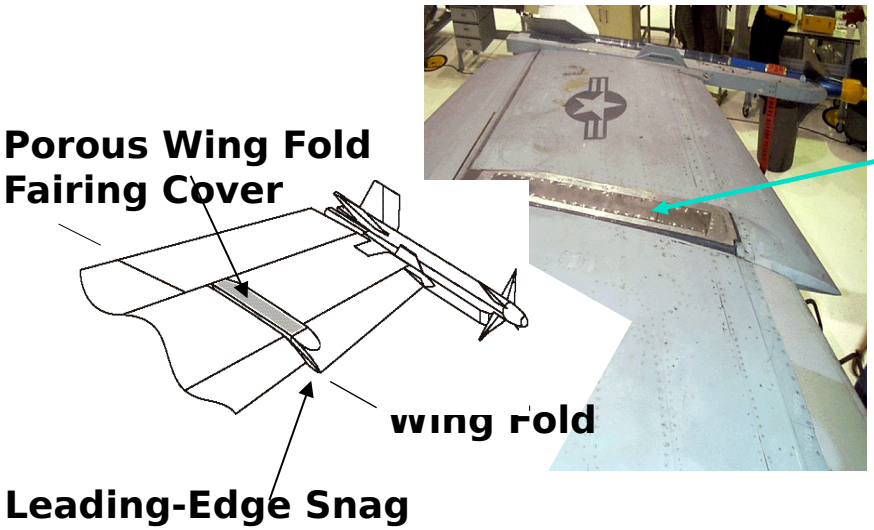


FY 02 Non-Real-Time Ground Demo

- Base RMP program initially buil on mature RESA technology
- S&T investment to allow full UE technology to “catch up”with RES
- Technology insertion timed to minimize impacts on SD&D

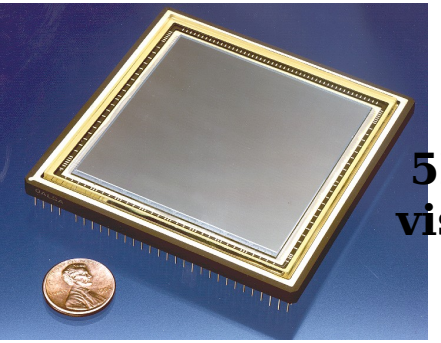
F/A-18E/F
Porous Door Solution

- Exploratory flights with wing fold fairing cover removed showed no wing drop.
- NASA Research funds (Equivalent to 6.2) had been supporting research into porosity as a means to control roll, fore body control and shock positioning.
- NASA recognized potential for transition to F/A-18E/F.
- NASA expertise in porosity flow control technology helped Boeing/Navy in the detail design of the porous door solution for flight.



NAVAL AVIATION SYSTEMS

F/A-18 SHARP DUAL BAND CAMERA DEVELOPMENT



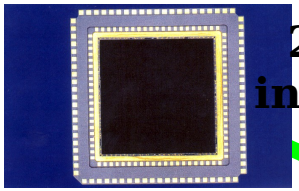
6.2 Developments

5K x 5K detector array visible band, circa 1996

Issues: Obtaining state of art perfo
from of newly productionized advanced components

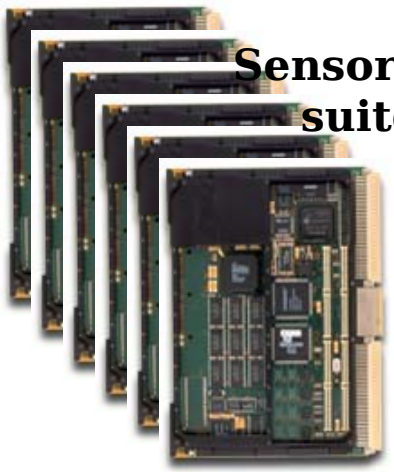
High data rate (1200 Mb/s) transmis
required state of art performan
compression/decompression boa

Dual band camera with large arrays
meeting stringent ORD requirer



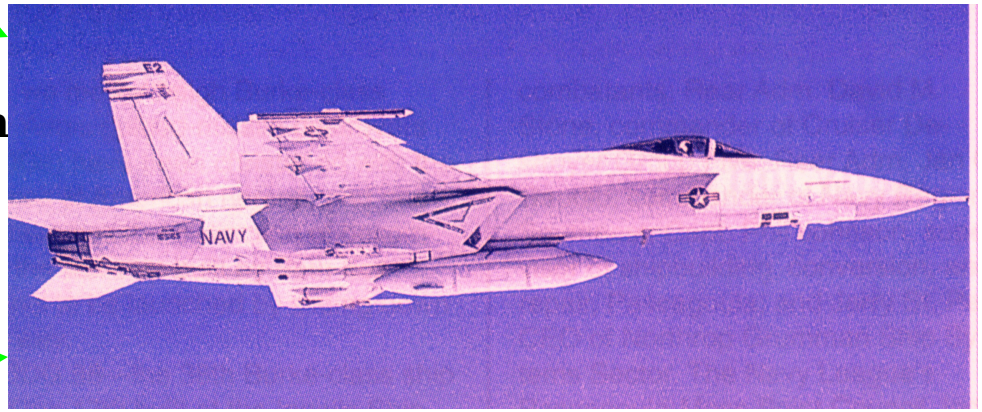
2K x 2K detector array infrared band, circa 1999

6.3 Developments



Sensor data compression suite (ARCH), 2000

SHARP pod on F/A-18E



THE RIGHT AIRCRAFT AT THE RIGHT TIME…